

FILIPPO PRENCIPE

Medicinal Chemist

Department of Chemical and Pharmaceutical Sciences

University of Trieste, via Licio Giorgieri 1

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PROFILE

Synthetic chemist in the field of Medicinal Chemistry, enthusiastic and self-motivated, during my previous experience I've developed expertise in synthetic organic chemistry and in the process of drug discovery focusing on the design, synthesis, purification and characterization of libraries of small organic molecules with potential therapeutic application. Mature team worker and adaptable to all challenging situations, competitive, I always seek to achieve high standards in whatever work I undertake

RESEARCH/SCIENTIFIC EXPERIENCE

Jan 2022 – present

University of Trieste, Department of Chemical and Pharmaceutical Sciences

Research Fellow Rtd-A

Design and synthesis of novel glucosylceramide synthase inhibitors for the treatment of Gaucher disease

- Structure-based and ligand-based in silico approach and screening of an ADME based molecules database for identification of hits compounds
- Hits selection, design synthesis and characterization of library of hits related small molecules
- Teaching role (Principles of asymmetric synthesis, practical organic synthesis laboratory supervisor, Chemistry of clinical analysis)
- Supervision of master students and PhD students

July 2020 – Nov 2021

University of Naples, Department of Pharmacy, Naples, Italy

Research Associate

Synthesis of short peptides containing non-conventional amino acids, design and synthesis of organic and metalorganic small molecules interacting with Selenoproteins

- Solid-phase manual synthesis of short peptides containing Seleno-cysteine as modified non-conventional amino acid
- Synthesis, purification and full spectroscopic characterization of Aurum (I) and Silver (I) N-heterocyclic carbenes (NHC) complexes targeting specific Selenoproteins (Thioredoxin reductase)

July 2018 – Feb 2020

Royal College of Surgeons in Ireland, Department of Chemistry, Dublin, Ireland

Postdoctoral researcher

Design and synthesis of small molecule Fcγ1a receptor antagonists and lead optimization study

- Design and synthesis of small organic molecules libraries, full spectroscopic characterization and purification of the synthesized compound
- Optimization and scale-up of the synthetic process of the identified lead compound

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Mar 2017 – May 2018

Trinity College Dublin, School of Chemistry, Trinity Biomedical Sciences Institute

Postdoctoral researcher

Design, synthesis and development of a novel generation of antibacterial agents specific for the treatment of Methicillin-resistant *Staphylococcus aureus* infections.

- Lead optimization study for the identification of novel biologically active small molecules
- Design and selection of synthetic routes for the preparation of small organic molecules libraries
- Spectroscopic characterization and purification of the synthesized compounds

University of Ferrara, Department of Chemistry and Pharmaceutical Sciences, Ferrara, Italy

Dec 2013 – Feb 2017

PhD student

Synthesis of chemically diverse novel series of tubulin polymerization inhibitors, targeting the colchicine site of α,β tubulin system, showing anticancer activity

- Synthesis, purification and characterization of cis-restricted analogues of Combretastatin A-4
- Design, selection and optimization of the synthetic routes

EDUCATION

University of Ferrara, Department of Chemistry and Pharmaceutical Sciences, Ferrara, Italy

February 2017

PhD Chemical and Pharmaceutical Sciences, Doctor Europaeus

Thesis: "Synthesis and biological evaluation *in vitro* and *in vivo* of novel anticancer agents affecting tubulin polymerization"

March 2012

Master's degree Chemical and Pharmaceutical Sciences 110/110

Thesis: "Synthesis and biological evaluation of a novel series of Pyrazolo[3,4- b]pyridin-4-ones as a New Class of Topoisomerase II Inhibitors"

TECNICAL SKILLS

- ✓ Substantial experience in practical synthetic organic chemistry and standard organic synthesis bench techniques
- ✓ Expertise in small/medium-scale synthesis of organic molecules
- ✓ Solid-phase peptide synthesis techniques
- ✓ Purification and characterization techniques (HPLC, silica gel column chromatography, NMR, 2D NMR, Mass spectroscopy, IR spectroscopy, UV/Vis)
- ✓ Full Knowledge of chemistry-related software (Chemdraw, Top spin, Mestrenova)
- ✓ Skilled in the use of synthetic database searching softwares (Reaxys, SciFinder)

SOFT SKILLS

- ✓ Creative problem-solving and strategic thinking
- ✓ Excellent time and resources management with the ability to work as member of a team as well as independently
- ✓ Experience in working as part of a multidisciplinary research team.
- ✓ Flexibility and adaptability to all challenging situations
- ✓ Determination and persistence to achieve goals and scientific excellence
- ✓ Strong communication and presentation skills
- ✓ Fluent oral and written english

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